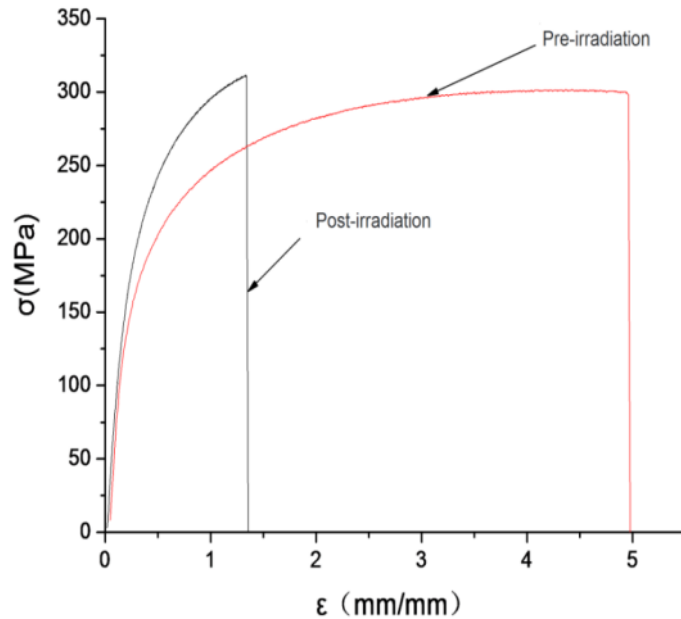
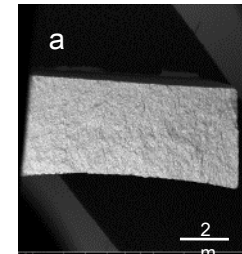


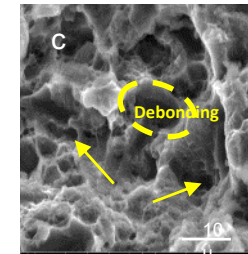
# Irradiation Stability Study on Boron Carbide Reinforced Aluminums Matrix Neutron Absorbing Material



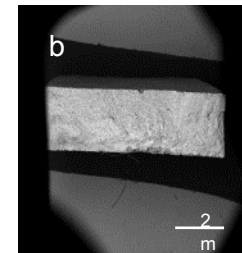
$B_4C/Al$  material before and after irradiation for typical tensile stress-strain curve.



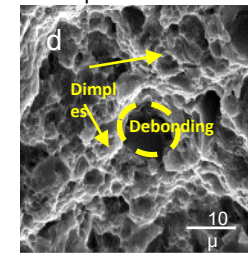
a. Macroscopic fracture pre-irradiation



c. The micro fracture pre-irradiation



b. Macroscopic fracture post-irradiation



d. The micro fracture post-irradiation

$B_4C/Al$  neutron absorber material fracture morphology pre- and post-irradiation

## $^{10}B$ surface density calculation results

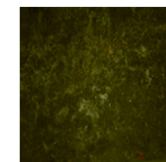
Item	pre-irradiation			post-irradiation		
	1#	2#	3#	1#	2#	3#
$^{10}B$ surface density (g/cm <sup>2</sup> )	$3.31 \times 10^{-02}$	$3.31 \times 10^{-02}$	$3.29 \times 10^{-02}$	$3.31 \times 10^{-02}$	$3.30 \times 10^{-02}$	$3.30 \times 10^{-02}$



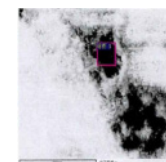
Pre-irradiation



Post-irradiation



Post-irradiation enlarged



$Al(OH)_3$  flocculated sediment (SEM)

$B_4C/Al$  neutron absorber material macro photos pre- and post-irradiation